

CLAIMS

We claim:

1. A pressure resistant plastic bottle for containing and dispensing an aerosol composition, comprising:

5 a hollow elongate body having a longitudinal axis and an outer wall, said outer wall defining a neck having an opening therein for receiving and dispensing an aerosol composition;

a flange projecting radially outwardly from said neck, said flange dividing said neck into an upper portion and a lower portion; and

10 reinforcement means for reinforcing the lower portion of said neck to reduce creep deformation of said lower portion.

2. The plastic bottle of claim 1 wherein the lower portion of said neck and the upper portion of said neck each have a wall thickness, and said reinforcement means comprises the wall thickness of the lower portion being about 1.25 to about 2.5 times greater
15 than the wall thickness of the upper portion.

3. The plastic bottle of claim 1 wherein the lower portion of said neck and the upper portion of said neck each has a wall thickness, and said reinforcement means comprises the wall thickness of the lower portion being about 1.5 to about 2.25 times greater
20 than the wall thickness of the upper portion.

4. The plastic bottle of claim 1 wherein the lower portion of said neck and the upper portion of said neck each has a wall thickness, and the reinforcement means comprises the wall thickness of the lower portion being about 2 times greater than the wall
thickness of the upper portion.

5. The plastic bottle of claim 1 wherein the lower portion of said neck has a
25 wall thickness and said flange has a radial thickness, and said reinforcement means comprises the wall thickness of the lower portion being from about 0.55 to about 1 times the radial thickness of the flange.

6. The plastic bottle of claim 1 wherein the lower portion of said neck has a wall thickness and said flange has a radial thickness, and the reinforcement means comprises
30 the wall thickness of the lower portion being about 0.6 to about 0.8 times the radial thickness of the flange.

7. The plastic bottle of claim 1 wherein the lower portion of said neck has a wall thickness and said flange has a radial thickness, and said reinforcement means comprises the wall thickness of the lower portion being about 0.7 times the radial thickness of the flange.

5 8. A pressure resistant plastic bottle for containing and dispensing an aerosol composition, comprising:

a hollow elongate body having a longitudinal axis and an outer wall, said outer wall defining a neck having an opening therein for receiving and dispensing an aerosol composition;

10 a flange projecting radially outwardly from said neck, said flange dividing said neck into an upper portion and a lower portion; and

wherein the lower portion of said neck has a wall thickness and the upper portion of said neck has a wall thickness such that the wall thickness of the lower portion compared to the wall thickness of the upper portion ranges between a ratio of from about 1.25:1 to about 2.5:1.

15 9. The plastic bottle of claim 8 wherein said ratio is from about 1.5:1 to about 2.25:1.

10. The plastic bottle of claim 8 wherein said ratio is about 2:1.

20 11. The plastic bottle of claim 8 wherein said outer wall is composed of a transparent plastic material.

12. The plastic bottle of claim 8 wherein said outer wall is composed of polyethyleneterephthalate.

13. The plastic bottle of claim 8 wherein said outer wall is composed of a polyethyleneterephthalate/polyethylenenaphthalate copolymer.

25 14. The plastic bottle of claim 8 further including a closure covering said opening and sealingly attached to said neck for containing said aerosol composition within said body.

15. The plastic bottle of claim 14 wherein said closure includes a valve member that enables dispensing of said aerosol composition.

30 16. The plastic bottle of claim 15 wherein said neck includes an annular rim adjacent said opening and said closure is affixed to said rim.

17. The plastic bottle of claim 8 wherein said body further includes an integral shoulder portion depending from said neck, said shoulder portion having a circular cross-sectional configuration taken through a plane perpendicular to said longitudinal axis and having an outwardly projecting convex configuration extending along its longitudinal direction.

18. The plastic bottle of claim 17 wherein said shoulder portion has a convex outer surface and a convex inner surface and wherein the outer and inner convex surfaces of said shoulder portion converge toward each other as said shoulder portion extends downwardly from said neck along said longitudinal direction.

19. A pressure resistant plastic bottle for containing and dispensing an aerosol composition, comprising:

a hollow elongate body having a longitudinal axis and an outer wall, said outer wall defining a neck having an opening therein for receiving and dispensing an aerosol composition;

a flange projecting radially outwardly from said neck, said flange dividing said neck into an upper portion and a lower portion; and

wherein the lower portion of said neck has a wall thickness and said flange has a radial thickness such that the wall thickness of the lower portion compared to the radial thickness of the flange ranges between a ratio of from about 0.55:1 to about 1:1.

20. The plastic bottle of claim 19 wherein said ratio is from about 0.6:1 to about 0.8:1.

21. The plastic bottle of claim 19 wherein said ratio is about 0.7:1.

22. The plastic bottle of claim 19 wherein said outer wall is composed of a transparent plastic material.

23. The plastic bottle of claim 19 wherein said outer wall is composed of polyethyleneterephthalate.

24. The plastic bottle of claim 19 wherein said outer wall is composed of a polyethyleneterephthalate/polyethylenenaphthalate copolymer.

25. The plastic bottle of claim 19 further including a closure covering said opening and sealingly attached to said neck for containing said aerosol composition within said body.

26. The plastic bottle of claim 25 wherein said closure includes a valve member that enables dispensing of said aerosol composition.

27. The plastic bottle of claim 26 wherein said neck includes an annular rim adjacent said opening and said closure is affixed to said rim.

5 28. The plastic bottle of claim 19 wherein said body further includes an integral shoulder portion depending from said neck, said shoulder portion having a circular cross-sectional configuration taken through a plane perpendicular to said longitudinal axis and having an outwardly projecting convex configuration extending along its longitudinal direction.

10 29. The plastic bottle of claim 28 wherein said shoulder portion has a convex outer surface and a convex inner surface and wherein the outer and inner convex surfaces of said shoulder portion converge toward each other as said shoulder portion extends downwardly from said neck along said longitudinal direction.